

**Section 1 – Identification of the Material and Supplier**

**Product Name:** Evopure Algae Killer  
**Product Use:** Swimming pool algaecide.  
**Proper Shipping Name:** Alkyl dimethyl benzyl ammonium chloride  
**Creation Date:** 1/06/2018  
**This version issued:** 1/06/2018 and is valid for 5 years from this date.

**Details of Manufacturer:**

Evolution Water & Lighting Solutions Pty Ltd  
1/33 Hinkler Drive, Highland Park QLD 4211  
Phone: +61 7 5565 0000  
Fax: +61 7 5565 0010  
Email: enquiries@evolutionwls.com.au

**Emergency Telephone Number: 000**

**Poisons Information Centre: 131 126 in Australia, 0800 764 766 in New Zealand**

**Section 2 – Hazards Identification**

**Hazard Classification of Substance**

Classified as hazardous according to criteria of Safework Australia;

**HAZARDOUS SUBSTANCE**

Classified as dangerous according to criteria of ADG Code.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in packagings, IBC's, or any other receptacle not exceeding 500 kg(L).

**SUSMP Classification:** S6 - POISON

**GHS Signal word: DANGER**



**HAZARD CATEGORY**

Acute toxicity, Category 4  
Skin corrosion, Category 1B  
Acute aquatic toxicity, Category 1  
Chronic aquatic toxicity, Category 1

**HAZARD STATEMENTS**

H302: Harmful if swallowed.  
H314: Causes severe skin burns and eye damage.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS**

**GENERAL**

P101: If medical advice is needed, have product container or label at hand.  
P102: Keep out of reach of children.  
P103: Read label before use.

**PREVENTION**

P273: Avoid release to the environment.  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

**RESPONSE**

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Poisons Information Centre: 131 126 in Australia. 0800 764 766 in New Zealand

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

#### STORAGE

P405 Store locked up.

#### DISPOSAL

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 – Composition/Information on Ingredients

#### Ingredients

Chemical Entity	CAS Number	Proportion	GHS Classification
Quaternary ammonium compounds benzyl-C12-14-alkyldimethyl ,chlorides	85409-22-9	Conc>=25%:	H302; H314 ; H400 ; H410

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible. If the sum of ingredients is less than 100%, the material consists of further ingredients determined not to be hazardous or below their cut-off limits.

### Section 4 – First Aid Measures

**General Information:** You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 131 126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

**Inhalation:** If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

**Skin Contact:** If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

**Eye Contact:** If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre, or a doctor, or for at least 15 minutes, and seek medical advice.

**Ingestion:** If swallowed, do NOT induce vomiting. Seek immediate medical advice.

**Advice to Doctor:** Treat symptomatically.

#### SYMPTOMS OF EXPOSURE

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

**Ingestion:** Harmful liable to cause nausea and vomiting. May cause tissue damage to mouth and gullet.

**Eye Contact:** Corrosive. May cause permanent injury and impairment of vision.

**Skin Contact:** Irritant. May be severe with sensitive individuals or after repeated contact. Prolonged or repeated exposure may lead to dermatitis. No specific data available on skin adsorption.

**Inhalation:** Not normally considered an inhalation hazard. Aspiration (breathing in) of liquid, spray mist liable to cause severe irritation and damage to respiratory tract.

**Section 5 – Fire Fighting Measures**

**Suitable Extinguishing Media:** Water spray jet, Foam, Carbon Dioxide (CO<sub>2</sub>), Dry Chemical Powder.

**Specific Hazards During Firefighting:** In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO), Nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride (HCl).

**Special Protective Precautions & Equipment for Fire Fighters:** Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of decomposition (CO<sub>x</sub>) NO<sub>x</sub> HCl evolved.

**Section 6 – Accidental Release Measures**

**Emergency Procedures / Environmental Precautions:** Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

**Personal Precautions / Protective Equipment / Methods & Materials for Containment & Cleaning Up:** Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. After cleaning, flush away any residual traces with water.

**Section 7 – Handling and Storage**

**Precautions for Safe Handling:** Handle and open container with care. Avoid skin and eye contact and breathing in vapour, mists and aerosols. Observe the general rules of industrial fire protection Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well ventilated place. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

**Section 8 – Exposure Controls and Personal Protection**

**Control Parameters:** Not determined for product. However for some ingredients the Derived No Effect Limit (DNEL) according to Regulation EC #1907/2006 are shown below:

Substance	End Use	Exposure Route	Potential health Effects	Value DNEL
85409-22-9 Alkyldimethylbenzyl ammoniumchloride	General population	Inhalation	Long-term systemic effects	1.64 mg/m <sup>3</sup>
	General population	Dermal	Long-term systemic effects	3.4 mg/kg bw/day

**Engineering Controls:** Ventilation: No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.

**Personal Protection:** The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.



Wear overalls, chemical goggles and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

### Section 9 – Physical and Chemical Properties

<b>Appearance:</b>	Translucent blue solution.
<b>Flammability:</b>	Product is not flammable.
<b>Boiling Point:</b>	100°C
<b>Flash Point:</b>	Unknown
<b>Vapour Pressure:</b>	Unknown
<b>Volatiles:</b>	60+/-0.5%w/w
<b>Vapour Density:</b>	Unknown
<b>Flammability Limits:</b>	Unknown
<b>Specific Gravity:</b>	0.95-1.05
<b>Solubility in water:</b>	Completely miscible.
<b>pH 1% Aqueous Solution:</b>	7.0
<b>Additional Information:</b>	Do not allow to enter watercourses, drains without copious dilution.

### Section 10 – Stability and Reactivity

**Reactivity:** Stable under normal conditions of use.

**Chemical Stability:** Stable under normal conditions of use.

**Conditions to Avoid:** Do store in ambient to warm areas- keep below 35°C for good shelf life.

**Incompatible Materials:** Oxidising agents (Class 5), or foodstuffs.

**Hazardous Decomposition Products:** The product will decompose in a fire giving off toxic gases, being oxides of carbon (COX), nitrogen (NOX) and hydrogen chloride.

**Hazardous Reactions:** None under normal conditions of use.

### Section 11 – Toxicological Information

**Acute Oral Toxicity:**

Quaternary ammonium compounds (QAC)

Acute Oral Toxicity LD50 (Rat) 500-2000 mg/kg

Method: OECD Test Guideline 401

Acute toxicity:	LD <sub>50</sub> (rat) 500-2000mg/kg
Skin corrosion/irritation:	Expected to be corrosive.
Serious eye damage/irritation:	Expected to be corrosive
Respiratory or skin sensitisation:	Not expected to be a sensitiser.
Germ cell mutagenicity:	Not expected to be mutagenic.
Carcinogenicity:	Not expected to be carcinogenic.
Reproductive toxicity:	Not expected to impair fertility.
Specific Target Organ Toxicity (STOT) – single exposure:	No data
Specific Target Organ Toxicity (STOT) – repeated exposure:	No data
Aspiration hazard:	Not expected to be a hazard.

## Section 12 – Ecological Information

**Ecotoxicity:** This product, while biodegradable at high dilution is toxic to marine and aquatic organisms. Ensure all spills are contained and recovered into suitable drums.

### Acute Toxicity:

Fish Method: OECD Test Guideline 203	LC <sub>50</sub> (Danio rerio (zebra fish)): 1 - 10 mg/l Exposure time: 96 h
Aquatic invertebrate Method: US-EPA FIFRA 72-2	EC <sub>50</sub> (Daphnia magna (Water flea)): 0,0058 mg/l Exposure time: 48 h Remarks: The values mentioned are those of the active ingredient.
Algae Method: OECD Test Guideline 201	EC50 (Selenastrum capricornutum (green algae)): 0,049 mg/l ; Exposure time: 72 h Remarks: The values mentioned are those of the active ingredient.
Microorganisms –	Data not available

### Chronic Toxicity:

Fish –	Data not available
Aquatic invertebrate – Method: OECD Test Guideline 211	NOEC: 0,025 mg/l Exposure time: 21 d End point: Reproduction rate
Algae –	Data not available
Microorganisms –	EC50 : 17 mg/l Method: OECD Test Guideline 209

### Persistence and Degradability:

Biodegradation: 35 - 70 %  
Method: OECD Test Guideline 302B  
Biodegradation: > 80 %  
Method: OECD Test Guideline 301A  
Remarks: Readily biodegradable, according to appropriate OECD test.

**Mobility in Soil:** No data available.

## Section 13 – Disposal Considerations

**Disposal Methods and Containers:** Do not dump large quantities into biological treatment ponds. Laboratory data indicates that if quaternary ammonium compounds are discharged steadily at low concentrations (<15 mg/litre), it may be expected that these salts can be degraded in sewage treatment plants by acclimatized organisms. Before discharging to sewer, contact local sewerage authority. Contact local Waste Disposal Authority regarding all major disposal problems. Rinse empty containers with clear water only, drain and re-seal before disposal or return.

## Section 14 – Transport Information

**Road and Rail Transport:** Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in packagings, IBC's, or any other receptacle not exceeding 500 kg(L).

UN Number: 3082  
Transport Hazard Class/s: 9 Miscellaneous Dangerous Goods



Poisons Information Centre: 131 126 in Australia. 0800 764 766 in New Zealand

Packing Group: III  
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Technical name: Alkyldimethylbenzylammoniumchloride and copper-amine complex  
Hazchem Code: 2Z  
IERG Number: 47

**Marine Transport:** Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN Number: 3082  
Transport Hazard Class/s: 9 Miscellaneous Dangerous Goods  
Packing Group: III  
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Technical name: Alkyldimethylbenzylammoniumchloride and copper-amine complex  
Hazchem Code: 2Z  
Special Instructions for User: NA  
IMDG EMS Fire: F-A  
IMDG EMS SPILL: S-F

**Air Transport:** Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN Number: 3082  
Transport Hazard Class/s: 9 Miscellaneous Dangerous Goods  
Packing Group: III  
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Technical name: Alkyldimethylbenzylammoniumchloride and copper-amine complex  
Hazchem Code: 2Z  
Environmental Hazards: Special marking provision: environmentally hazardous. Shipment permitted

### Section 15 – Regulatory Information

**Classification:** This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

**Classification of the Substance or Mixture:**  
Acute toxicity, Category 4  
Skin corrosion, Category 1B  
Acute aquatic toxicity, Category 1  
Chronic aquatic toxicity, Category 1

**Hazard Statements:**  
H302: Harmful if swallowed.  
H314: Causes severe skin burns and eye damage.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.

**Poisons Schedule (SUSMP):** 6 POISON

**AICS:** All ingredients are on the Australian Inventory of Chemical Substances.

### Section 16 – Other Information

This SDS contains only safety-related information. For other data see product literature.

**Contact Person / Point:**

FOR EMERGENCIES ONLY CONTACT: Australia: 000  
POISONS INFORMATION CENTRE: Australia 131126  
New Zealand 0800 764 766

**Acronyms:**

<b>ADG</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail
<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>ASCC</b>	Australian Safety and Compensation Council
<b>Carcinogen Category Number</b>	1. Established human carcinogen 2. Probably human carcinogen 3. Substances suspected of having carcinogenic potential
<b>Code AICS</b>	Australian Inventory of Chemical Substances
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>EPG</b>	Emergency Procedure Guide ( superseded by IERG)
<b>Hazchem Code</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>IATA</b>	International Air Transport Association
<b>IERG</b>	HB 76-2004 Dangerous goods - Initial Emergency Response Guide
<b>IMDG</b>	International Maritime Dangerous Goods. A uniform code for transport of dangerous goods at sea.
<b>LEL</b>	lower flammable (explosive) limits in air;
<b>LD<sub>50</sub></b>	Lethal Dose sufficient to kill 50% of test population
<b>NIOSH</b>	National Institute for Occupational Safety and Health The United States federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness.
<b>NOAEL</b>	No Observed Adverse Effect Level
<b>NOEL</b>	No Observable Effect Level
<b>NOHSC</b>	National Occupational Health and Safety Commission
<b>NTP</b>	National Toxicology Program (USA)
<b>PEL</b>	Permissible Exposure Limit
<b>RTECS</b>	Registry of Toxic Effects of Chemical Substances (Symyx Technologies)
<b>TCLO</b>	Toxic Concentration Low
<b>TDLO</b>	Toxic Dose Low : lowest dosage per unit of bodyweight (typically stated in milligrams per kilogram) of a substance known to have produced signs of toxicity in a particular animal species.
<b>TLV</b>	Threshold Limit Value (ACGIH):The time weighted average used to describe exposure which is harmless to most of the population when exposed 8 hours per day, 40 hours per week.
<b>TWA</b>	(Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
<b>SAFEWORK</b>	Independent statutory agency with primary responsibility to improve occupational health and safety and workers' compensation arrangements across Australia.
<b>STEL</b>	(Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.
<b>SUSDP</b>	Standard for the Uniform Scheduling of Drugs & Poisons
<b>SUSMP</b>	Standard for the Uniform Scheduling of Medicines & Poisons
<b>UEL</b>	upper flammable (explosive) limits in air;
<b>UN Number</b>	United Nations Number

**Sources for data.**

Safety Data Sheets from Suppliers  
 Hazardous Substances Information System (HSIS)– ASCC Australia (on-line)  
 GHS (Globally Harmonised System of Substance Classification & Labelling)  
 REACH (European Chemical Substance Information System)  
 ADG Code 7th Edition  
 SUSMP No 13

**Disclaimer:**

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Evolution Water and Lighting Solutions Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. If clarification or further information is needed, the user should contact Evolution Water and Lighting Solutions Pty Ltd at the contact details on page 1. Evolution Water and Lighting Solutions Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request. Evolution Water and Lighting Solutions Pty Ltd however makes no warranty whatsoever, expressed, implied or of merchantability regarding the accuracy of such data or the results to be obtained from the use thereof and assumes no responsibility for injury to buyer or third persons or for any damage to property, Buyer assumes all risks.